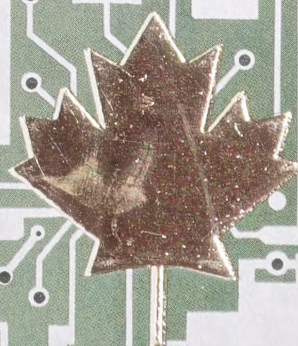


AR29

# CANADIAN MARCONI COMPANY ANNUAL REPORT — 1980





## DIRECTORS

R.O. Beauchemin  
Senior Partner  
Beauchemin-Beaton-Lapointe Inc.  
Montreal, Canada

E.O. Herzfeld  
Vice Chairman  
Canadian Marconi Company  
Montreal, Canada

I.D. Sinclair, Q.C.  
Chairman and Chief Executive Officer  
Canadian Pacific Limited  
Montreal, Canada

\*S. Dobb, F.C.A.  
Assistant Managing Director  
GEC-Marconi Electronics Ltd.  
London, England

\*\*H.J. Lang  
Chairman of the Board  
Canron Inc.  
Toronto, Canada

Sir Robert Telford, C.B.E., F. Eng.  
Director  
The General Electric Company Limited  
Managing Director  
GEC-Marconi Electronics Ltd.  
London, England

\*T.S. Dobson  
Chairman  
Easton United Securities Limited  
Calgary, Canada

J.E. Pateman, C.B.E., M.I.E.E.  
Managing Director  
Marconi Avionics Ltd.  
London, England

R.J. Williams  
President and Chief Executive Officer  
Canadian Marconi Company  
Montreal, Canada

\*\*Chairman Audit Committee

\*Member Audit Committee

## OFFICERS

E.O. Herzfeld  
Vice Chairman

J.W. Dodds, PhD  
Vice President, Special Services Division

J.H. Simons  
Vice President, Avionics Division

R.J. Williams  
President and Chief Executive Officer

C. Filiatrault  
Vice President, General Counsel and  
Secretary

C. St.Arnaud  
Vice President  
Telecommunications Division

W. Baillie  
Senior Vice President, and  
Manager, Products and Markets

G. Gorfinkel  
Vice President, Marine and Land  
Communications Division

J.G. McInnes  
Comptroller

P.E. Wheatley  
Senior Vice President, and  
Chief Financial Officer

J.A. Howlett  
Vice President, Organization and Personnel

G. Stuurop  
Treasurer

Cover:  
CMC's multilayer printed wiring  
boards are custom built to client  
specifications!

### REGISTERED OFFICE

2442 Trenton Avenue  
Montreal, Canada H3P 1Y9  
Telephone: (514) 341-7630

### REGISTRAR

Montreal Trust Company  
Montreal, Canada

### TRANSFER AGENT

Canada Permanent Trust Company  
600 Dorchester Boulevard West  
Montreal, Canada H3B 1N6

### AUDITORS

Price Waterhouse & Co.  
Montreal, Canada

### EXCHANGE LISTINGS

Toronto Stock Exchange  
Montreal Stock Exchange  
American Stock Exchange

**The Annual General Meeting  
of Shareholders will be held at  
the Corporation's Registered  
Office in the City of Montreal,  
380 Aberdare Road entrance,  
on Thursday, August 7, 1980 at  
11:00 o'clock.**

*Pour obtenir une copie  
française de notre rapport  
annuel, prière d'adresser votre  
demande au Secrétaire de la  
Société.*

*Facing page:  
Canadian Marconi Company  
Board of Directors  
(Sitting) I.D. Sinclair,  
E.O. Herzfeld, R.J. Williams,  
Sir Robert Telford  
(Standing) T.S. Dobson,  
R.O. Beauchemin, S. Dobb,  
J.E. Pateman, H.J. Lang*







## CANADIAN MARCONI COMPANY BUILDING ON STRENGTH

### INTO THE EIGHTIES

Canadian Marconi's entry into the new decade is a time to take stock of resources and review strategy for the future.

The 1980's will be one of challenge for the Company as the pace of technological change outstrips even that of the 1970's.

To the 2,200 men and women of CMC, this will mean extending a tradition of 77 years of mastering contemporary technological trends.

The chief challenges of the eighties will be to reinforce CMC's advantageous position in the design, production and marketing of high-technology avionics, radar and communications equipment, and to create openings in related fields that offer room for expansion.

The corporate strategy for meeting these challenges is to round out the

development of proven product lines and to introduce new ones in anticipation of market opportunities.

This strategy is aimed at maximizing returns by capitalizing fully on existing facilities, skills and knowledge and thus proceeding from strength to strength to ensure future growth.

### ENGINEERING FOR CHANGE

In line with this thrust, the Company's extensive research and development program focuses largely on the potential for regeneration among its current products and the possibility of developing derivatives. In this way, the uncommonly high proportion of the sales dollar dedicated to R & D will bear fruit.

Recognizing that technology is constantly progressing, CMC's products are engineered in such a way that they can be revitalized by the application of new processes, materials and techniques as they evolve.

CMC's Doppler navigation systems, for example, are now in their fifth generation of technology. The introduction of miniaturized components, computer memories and improved antenna design has resulted in increased compactness, reliability and versatility. It has also given this product line increased capabilities for flying search and rescue patterns, and flying at night and in adverse weather. Specifically, the reduction in size of CMC Doppler systems led to their increased use by helicopters, in which there is a growing demand for self-contained navigational devices.

*The AN/APN-221 Doppler Navigation System is currently used in the USAF Pave Low III helicopter.*





*Offshore oil exploration and geodetic positioning are among the varied uses of the CMA-751 Satellite Survey System.*

## BRANCHING OUT

CMC's highly successful Omega navigation systems exemplify the process of building on existing competence. Because of their airborne navigation experience, the Company's engineers logically looked at the development of this long-range radio-based aerial navigation technique. Now entering their third generation, CMC Omega systems have been sold to more than 20 world-ranking scheduled airlines, 55 general aviation operators and several western air forces. Such is Canadian Marconi's leadership in Omega systems that they are now offered as standard equipment options by major U.S. and European aircraft manufacturers.

## ANTICIPATING THE MARKET

An instance of developing products in anticipation of market opportunities may be found in CMC's current NAVSTAR project. This navigational system, now in an advanced development phase, is designed to take ad-

vantage of the U.S. Air Force navigational satellites that will be in orbit by 1985. The airborne receivers being developed by CMC will keep constant watch on at least three of these satellites at a time, and instantly compute a three-dimensional fix. The Company sees NAVSTAR, with its many revolutionary features, as the beginning of a whole family of global positioning satellite systems for use in almost all forms of airborne and terrestrial navigation well into the next century.

In the meantime, CMC has already developed a line of satellite receiving and computing systems for marine navigation and position location applications. One model provides ultra-precise position information for scientific and survey ships, while another is used in remote parts of the world for geodetic surveying to a degree of precision unattainable in the past. These equipments have proved







*CMC's mobile radiotelephones and base stations provide an important network of vehicle, aircraft and fixed communications for the James Bay hydro-electric project.*

themselves effective in such varied tasks requiring extreme accuracy as cable-laying, oceanographic surveying, marine biology and gas and oil drilling. The recent acceleration in development of natural resources has broadened the field of application of such products.

## PRODUCT EVOLUTION

The Company is growing outward from its traditional product lines in communications as well as navigation. While steady improvements have been made in the quality and capacity of its civilian high frequency, very high frequency and ultra high frequency radio systems, CMC has also been enhancing and expanding its capability in the military communications field.

The benefits of equipment that can be upgraded in step with technological advance are manifest in the success of the AN/GRC-103. This tactical radio relay system, originally designed for the U.S. armed forces, can, thanks to its modular configuration,

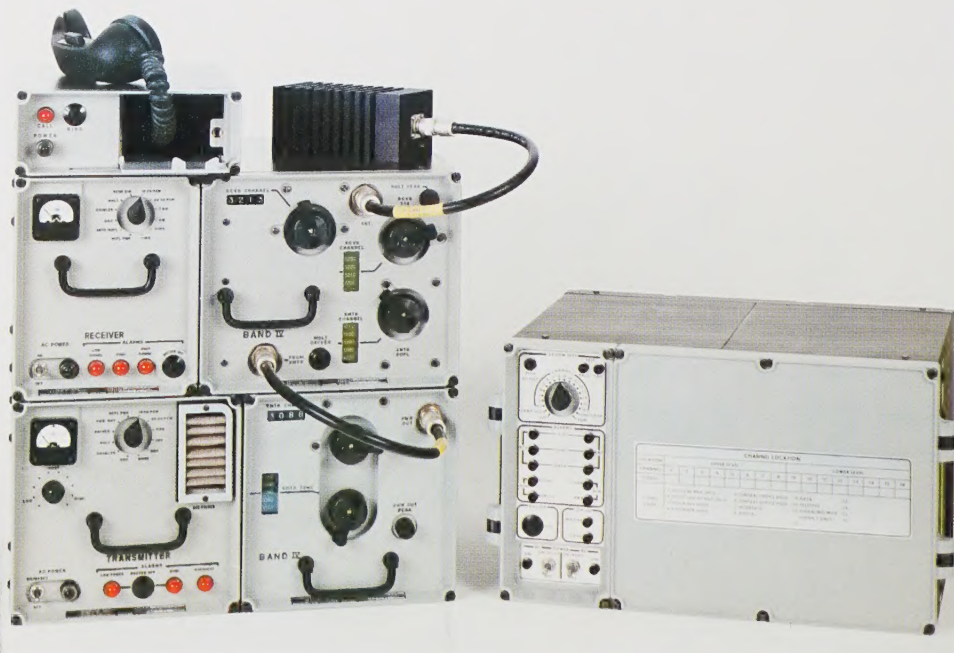
be enhanced by the introduction of improved components, materials, processes and ancillaries to keep pace with the state of the art.

From its introduction, this equipment has been the subject of a continuous product improvement program which has led, among other things, to extensions to its frequency range, improved reliability, an increase in the number of channels, reduction of mechanical components and an improved error rate.

## EXTENDING THE LINE

The ongoing enlargement of CMC's place in tactical communications is typical of the Company's step-by-step approach to building its future.

Complementary to the work on the AN/GRC-103, development has been completed on a self-contained delta-modulation multiplexer capable of providing 15 voice channels over a radio or cable link. This Deltaplex is fully compatible with Canadian Marconi and other similar military radio sets and can be stacked to provide up to 63 voice channels.



*Operational use of the AN/GRC-103 Radio Relay is enhanced by the addition of the MTD-1010 Deltaplex, in photo at far right. The SA-12C Tactical Switchboard, a new addition to CMC's product line, is shown in use above.*



## CANADIAN MARCONI COMPANY

## Financial Highlights

(in thousands of dollars, except as otherwise stated)

Year ended March 31

	1980	1979	1978	1977	1976
Sales and other revenues	<b>\$112 830</b>	\$84 223	\$57 252	\$58 325	\$58 288
Net income	<b>12 170</b>	7 603	4 184	2 068	4 005
Dividends	<b>2 526</b>	1 575	1 263	1 189	1 189
Shareholders' equity	<b>59 645</b>	50 001	43 973	41 052	40 173
Funds (Working Capital)	<b>55 212</b>	47 823	42 977	40 815	40 134
Number of shares (in thousands)	<b>5 943</b>	5 943	5 943	5 943	5 943
Per share data (in dollars)					
Net income	<b>2.05</b>	1.28	0.70	0.35	0.67
Dividends	<b>0.425</b>	0.265	0.2125	0.20	0.20
Shareholders' equity	<b>10.04</b>	8.41	7.40	6.91	6.76



## DIRECTORS' REPORT TO SHAREHOLDERS

### REVIEW OF THE FISCAL YEAR

Sales and revenues rose to almost \$113 million, an increase of 34% over the previous year, while net income rose to \$12,170,000, or \$2.05 per share, an increase of 60%.

The higher sales volume resulted largely from increased export shipments of tactical radio relay systems. Sales of electronic components, destined primarily for the high-quality requirements of the international military equipment market, also rose sharply in the year and are now a significant contributor to the Company's overall results. In August 1979, the Company recorded the sale to Téléglobe Canada of an international telex transit exchange, which has been commissioned and is in successful operation.

Profitability was also assisted by the high interest yields obtained on our short-term investments.

Order backlog rose to approximately \$140 million, of which more than 95% is for export, compared with \$85 million at the start of the fiscal year. As announced earlier, this includes an order for the supply of nine subscriber telex exchanges to the British Post Office valued at \$35

million, which are scheduled for delivery during the period 1981 to 1984. The contract was obtained in competition with a number of major international suppliers. Orders totalling more than \$55 million were received for tactical radio relay systems, mainly from the United States. Important export orders were also booked for Doppler airborne navigation systems.

During the year, we expended more than \$5.5 million of our own resources on research and development, nearly double the outlay of the previous year. We consider this level of expenditure essential to secure the long-term growth of the Company's business. Among other major projects, continued progress was achieved in the development of a capability in naval radar systems. The design phase of the development of a delta-modulation multiplexer has now been completed; this will add a further major product line to the range offered in the international military communications market and we expect it to contribute to our order intake in the coming year.

As a result of the rising level of activity in the last three years, our Montreal manufacturing plant, which comprises some 480,000

square feet, is now operating virtually at capacity. Steps have recently been taken to acquire about 15 acres of land near Ottawa, on which the first phase of construction will begin in 1980. Initially, a facility of approximately 50,000 square feet will be built to accommodate our existing Ottawa research and development team, and also the manufacture of certain new product lines. The land will be sufficient for further expansion over the longer term, as required by increasing activity. This location was chosen to enable us to attract the skilled technical and managerial staff essential to our growth.

### INVESTMENTS

Cash and short-term investments at fiscal year end totalled over \$44 million, compared with \$37 million at the previous year end. Capital expenditures and the higher level of activity implied by our order backlog will increase the demands on our liquid resources in the coming year.

In January 1980, the Company acquired from The Sippican Corporation of Marion, Massachusetts, design and marketing rights and certain other assets relating to its line of military communications equipment, comprising two



field switchboards and a radio-wire integrator. We believe that this has the potential to broaden our current range of military products and make a useful contribution to our sales.

Sufficient funds, however, will be available for a more substantial acquisition that will complement our existing operations and satisfy our investment criteria. Renewed efforts are being made in this direction.

## OUTLOOK

The continued growth of the order backlog and the increasing range of products are encouraging for the Company's prospects for sales and earnings in the coming years. However, the pattern of earnings will depend to a large degree on the composition and phasing of deliveries against long-term contracts. It should not be assumed that reported short-term results will show a consistently improving trend, and in fact the indications are for a lower level of earnings in the first half of the current year.

We expect that in the new fiscal year as a whole the Company will match the levels of revenues and earnings reported for the year just ended, given a continuation of the favourable factors that have af-

fectured us in recent years. It is especially important to major exporters like ourselves that the Canadian dollar remain at a competitive rate against the U.S. dollar and other world currencies. In addition, we are unable to forecast the possible effects of the recent upsurge in the rate of cost inflation in North America, bearing in mind that a substantial proportion of the orders in house have of necessity been contracted at fixed prices. Finally, operating costs will be increased to some degree by our expansion with the new Ottawa facility, which will involve start-up outlays and higher depreciation expense.

## DIVIDENDS

The Directors declared a dividend of 25 cents per share payable on June 16, 1980, to shareholders of record as at May 30, 1980. This compares with 22.5 cents declared in November 1979 and 20 cents in May 1979 and represents the fourth successive half-yearly increase in the dividend.

## ORGANIZATION

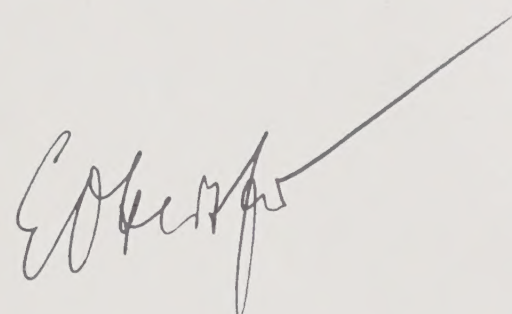
In February, Mr. Claude St. Arnaud, who heads our Telecommunications Division, was appointed a Vice President of the Company, and Messrs. Gustave

McInnes and Gerrit Stuurop were appointed Comptroller and Treasurer respectively.

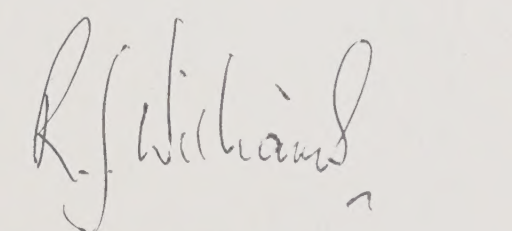
## TRIBUTE TO STAFF

We wish to extend our appreciation to the men and women at all levels in the Company who have worked so hard to make possible the achievements of the past year.

On behalf of the Board,



E.O. HERZFELD  
Vice Chairman



R.J. WILLIAMS  
President and  
Chief Executive Officer  
Montreal, May 22, 1980



(in thousands of dollars)

## Assets

1980

1979

## Cash

**\$ 2 769**

\$ 353

Short-term investments, at cost, including accrued interest (approximates market)

41 892

37 371

Accounts receivable

13 700

14 394

Owing by associated companies

1 313

721

Inventories (Note 2)

22 749

14 463

Prepaid expenses

276

453

82 699

67 755

**Fixed assets, at cost, less accumulated depreciation (Note 3)**

10 029

8 240

**\$92 728**

\$75 995

Approved by the Board:

E.O. Herzfeld, *Director*

R.J. Williams, *Director*



# Consolidated Balance Sheet

(in thousands of dollars)

March 31

<b>Liabilities and Shareholders' Equity</b>	<b>1980</b>	<b>1979</b>
<b>Current liabilities:</b>		
Accounts payable and accrued liabilities	\$23 389	\$16 510
Owing to associated companies	394	214
Income taxes	3 704	3 208
	<u>27 487</u>	<u>19 932</u>
<b>Deferred income taxes</b>	<u>1 346</u>	<u>1 029</u>
<b>Long-term debt (Note 4):</b>		
5¾% unsecured sinking fund debentures, Series A, due May 1, 1988	2 621	3 143
7% unsecured sinking fund debentures, Series B, due June 1, 1989	1 629	1 890
	<u>4 250</u>	<u>5 033</u>
<b>Shareholders' equity</b>		
Stated capital—		
5 943 192 common shares	10 216	10 216
Retained earnings	49 429	39 785
	<u>59 645</u>	<u>50 001</u>
	<u>\$92 728</u>	<u>\$75 995</u>



## Auditors' Report

### To the Shareholders of Canadian Marconi Company:

We have examined the consolidated balance sheet of Canadian Marconi Company as at March 31, 1980 and the consolidated statements of income, retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the Company as at March 31, 1980 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Montreal, May 16, 1980

Price Waterhouse & Co.  
Chartered Accountants



## Consolidated Statement of Income

(in thousands of dollars)

Year ended March 31

	1980	1979
<b>Revenue:</b>		
Electronic products	\$108 457	\$81 287
Income from short-term investments	4 373	2 936
	<u>112 830</u>	<u>84 223</u>
<b>Operating costs and expenses:</b>		
Manufacturing, selling and administration	84 890	67 059
Research and development (net of government participation—\$868 000, 1979—\$884 000)	5 564	2 813
Depreciation (Note 3)	1 959	1 349
Interest on long-term debt	301	331
	<u>92 714</u>	<u>71 552</u>
<b>Income before income taxes</b>	<b>20 116</b>	<b>12 671</b>
Provision for income taxes	7 946	5 068
<b>Net income</b>	<b>\$ 12 170</b>	<b>\$ 7 603</b>
<b>Earnings per share (in dollars)</b>	<b>\$ 2.05</b>	<b>\$ 1.28</b>

## Consolidated Statement of Retained Earnings

(in thousands of dollars)

Year ended March 31

	1980	1979
<b>Retained earnings, beginning of year</b>	<b>\$ 39 785</b>	<b>\$33 757</b>
<b>Net income</b>	<b>12 170</b>	<b>7 603</b>
	<u>51 955</u>	<u>41 360</u>
Dividends—42.50 cents per share (1979—26.50 cents per share)	2 526	1 575
<b>Retained earnings, end of year</b>	<b>\$ 49 429</b>	<b>\$39 785</b>



# Consolidated Statement of Changes in Financial Position

(in thousands of dollars)

Year ended March 31

	1980	1979
<b>Funds (working capital) were provided from:</b>		
Operations—		
Net income	\$12 170	\$ 7 603
Depreciation	1 959	1 349
Deferred income taxes	317	164
	14 446	9 116
Proceeds from sale of fixed assets	234	219
Decrease in deferred accounts receivable	—	68
	14 680	9 403
 <b>Funds (working capital) were applied to:</b>		
Additions to fixed assets	3 982	2 638
Reduction of long-term debt	783	344
Dividends	2 526	1 575
	7 291	4 557
Increase in funds	7 389	4 846
Funds, beginning of year	47 823	42 977
Funds, end of year	\$55 212	\$47 823



# Notes to Consolidated Financial Statements—March 31, 1980

## 1. Summary of accounting policies:

- a) **Principles of consolidation**—The consolidated financial statements include the accounts of Canadian Marconi Company and those of its subsidiary companies, Marconi Company, Inc. and CMC Electronics, Inc.
- b) **Translation of foreign currencies**—Current assets and liabilities in foreign currencies are translated into Canadian dollars at rates of exchange in effect as at the balance sheet date. Amounts entering into results of operations are translated at average rates. Exchange profits and losses are included in income.
- c) **Inventories**—Work in process, raw materials and bought-out components and finished products are valued at the lower of cost and estimated net realizable value. Deductions are made for progress payments received and any losses incurred or expected to be incurred on contracts not completed at the balance sheet date.
- d) **Fixed assets and depreciation**—Fixed assets are recorded at cost. Depreciation is provided on the straight-line method at rates based on the estimated useful lives of depreciable assets. Fixed assets retired or disposed of are eliminated from the asset and accumulated depreciation accounts. Gains and losses from disposals are included in income.
- e) **Income taxes**—The Company follows the practice of providing for income taxes based on income included in the financial statements regardless of when such income is subject to payment of taxes under the tax laws.
- f) **Recognition of revenue**—Sales are normally recognized when products are delivered to customers; however, revenue from major long-term contracts is recorded on the percentage of completion method based on the ratio of the incurred costs to date to the projected total costs of completing the contracts.

## 2. Inventories:

	1980	1979
	(in thousands)	
Inventories comprise:		
Raw materials and bought-out components	\$ 5 735	\$ 4 084
Work in process	21 037	17 419
Finished products	4 028	5 348
	30 800	26 851
Progress payments	(8 051)	(12 388)
	<u>\$22 749</u>	<u>\$14 463</u>
	1980	1979

## 3. Fixed assets:

	Cost	Accumulated depreciation	(in thousands)	
			Net	Net
Land	\$ 483	\$ —	\$ 483	\$ 483
Buildings	7 470	3 895	3 575	3 684
Plant, machinery and equipment	6 919	2 782	4 137	2 424
Equipment on rental	3 879	2 045	1 834	1 649
	<u>\$18 751</u>	<u>\$ 8 722</u>	<u>\$10 029</u>	<u>\$ 8 240</u>

The estimated useful lives of depreciable assets are as follows:

Buildings	25 to 50 years
Plant, machinery and equipment	up to 10 years
Equipment on rental	up to 4 years

Capital expenditure authorized and committed at March 31, 1980 was \$1 729 000.

## 4. Long-term debt:

Sinking fund provisions of the Series A and B debentures require payments aggregating \$390,000 annually in the years 1980 to 1983 and \$475,000 annually in the years 1984 to 1987. Debentures have been purchased and surrendered for cancellation in full satisfaction of requirements of the years 1980 to 1984 inclusive, and in partial satisfaction of requirements of the year 1985.

## 5. Pension plan:

At March 31, 1980 all vested past service benefits in the Company's pension plan were fully funded.



*CMC Telex Exchanges  
are in operation at Teleglobe  
Canada and are under  
contract to be delivered to  
the British Post Office.*

With the addition of a digital order wire now in the advanced design stage in Montreal, the Company will be able to market a complete tactical radio relay system capable of inter-operability with all of the systems employed by NATO forces. To expand further its range of tactical communications equipment, the Company has acquired all the design, manufacturing and marketing rights to the military switchboard and radio-wire integrator equipments developed by The Sippican Corporation of Massachusetts.

## THE INTEGRATED APPROACH

Canadian Marconi's activity in tactical communications is part of a policy directed towards offering fully integrated systems. This approach to the product range has an internal parallel.

Some years ago, it was decided to produce electronic components in-house to overcome problems of price, quality and delivery. This ultimately led to the formation of a highly skilled and well equipped group working in printed circuit boards, hybrid microcircuits, fibre optics, edge-lit panels, injection moulding, power supplies and magnetics.

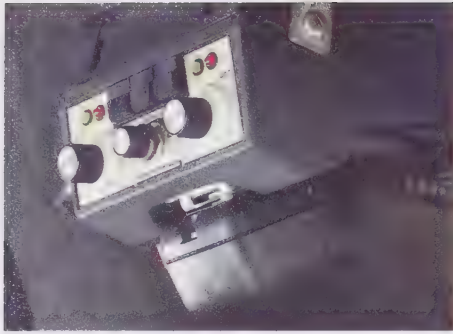
Tightly controlled in quality, these processes are capable of producing components to the most stringent specifications.

The Components Group has now expanded far beyond CMC's internal requirements. It has become one of the Company's fastest growing segments, selling the bulk of its output to other leading electronic manufacturers in Canada, the U.S. and overseas.

A further measure of CMC's comprehensive capability is that its service operations both support the







*The Mobile VHF/UHF Repeater and its accompanying base station complex provide the complete communications network for the Ontario Ministry of Health Hamilton Region Ambulance Dispatch System.*



Company's own products, and repair and calibrate electronic equipment for military, government and commercial clients.

## **A BLEND OF RESOURCES**

Obtaining optimum results from the full range of Company activities is probably the single most important function of management. One of the most effective ways of doing this is to exploit the combination of skills, experience and technical capabilities at hand. This results in virtually all of CMC's sales deriving from products

it has designed and manufactured in Canada.

The Company's success in the telex switching field is a case in point. It resulted from years of work in avionics, communications and component design. Drawing on their experience in computing techniques, CMC engineers developed telex exchanges that are particularly cost effective for large-scale applications.

In addition, their expandability was a factor in winning a recent contract for nine exchanges for the British Post Office. At a time of rapid worldwide growth in telex traffic, the Company has attained a strong position in an important market area. In securing this order, CMC capitalized upon another of its corporate strengths, its international affilia-



*The CMA-730 Vertical Instrument Display System has recently been accepted as a standard installation on Canadair's Challenger.*





*The recently-developed  
CMR-1819 Surveillance  
Radar is used to detect air  
and surface targets.*



tion. The Company was assisted by GEC Telecommunications Ltd., like CMC, a subsidiary of The General Electric Company Limited of London, England. Canadian Marconi is now collaborating with Marconi Radar Systems Ltd., also based in England, in the development of two new surveillance radar systems. One of these is a medium-range, medium-power equipment designed to operate in either a commercial or military role. The second is a naval system built to strict defence specifications. Both are scheduled to enter world markets within the next two years.

The development of these radar systems is taking place in the Company's research and development facility in Ottawa, where work is also underway on new digital avionic systems. The project in the most advanced phase of development is a status display designed to replace the

standard warning lights in aircraft cockpits. This CMC system is linked to a computer which provides memory facilities and can make "decisions" on the priority of warnings and other information presented to the aircrew.

Work is in progress on vertical panel display systems, applying liquid crystal display technology to flight data. The Company is already a leading manufacturer of vertical scale, solid-state instruments which combine fibre optics with incandescent lights to give clearer and more reliable indications of important engine parameters such as fuel flow, pressure, torque and temperature.

The first such installations were in the U.S. Army Mohawk reconnaissance aircraft and the Blackhawk helicopter; units are also being delivered for other U.S. military helicopters. Similar displays are standard equipment in the Canadair Challenger aircraft.

The R & D teams maintain close relations with their Canadian government counterparts and this continues to yield positive results. The latest is a photogrammetry system based on a stereoplottor developed by the National Research Council. This new product allows cartographers to produce, semi-automatically, contour maps from aerial photographs.



*Anaplot, a photogrammetry  
system, provides  
cartographers with a semi-  
automatic capability of  
producing contour maps  
from aerial photographs.*



## THE IMPORTANCE OF EXPORTS

Although much of CMC's civilian communications equipment and service activities is marketed in Canada, it has long been recognized that the Company must export all but a small proportion of its products.

As a high technology Canadian company, CMC is proud of its export record. In recent years, about 85 per cent of its manufactured production has been exported, measured in dollar value of sales. In particular, fully 99 per cent of the Company's military communications products and 89 per cent of its avionics are exported. The United States is Canadian Marconi's best market, taking about 60 per cent of its output. An increasing volume, however, is being

sold currently to more than 25 countries and overseas sales are expected to rise.

As a competitor in the dynamic and demanding world of high technology, Canadian Marconi must make every effort to maintain its lead in the product lines in which it is dominant. At the same time, the high cost of innovation demands that CMC continue to make the most of its existing resources to expand its product range. This can only be done through the efforts of its employees. In the final analysis, their ability is CMC's most vital asset. Throughout the spectrum of activity—in avionics, radar, communications, components and services—human skills and ingenuity are the keys to Canadian Marconi's future.



*Omega Navigation Systems like the CMA-771 provide vital navigation capability for commercial airlines and general aviation aircraft world wide.*



*Back cover:  
The LN-66 Radar is used in a  
variety of commercial and  
military roles in surface and  
airborne vehicles.*

## OPERATING DIVISIONS

### AVIONICS DIVISION

Development, manufacturing, and marketing of:

- airborne systems including Doppler Navigation, Automatic Omega, Vertical Instrument Displays, GPS NAVSTAR, Aircraft Status Displays, Flight Advisory Computers, and Digital Avionics.
- ground based systems including Satellite Doppler Survey, Telex Exchanges, and Photogrammetric Processors.
- custom electronic components including printed wiring boards, hybrid microcircuits, magnetic devices, edge-lit panels, alpha-numeric displays, and power supplies.

### MARINE AND LAND COMMUNICATIONS DIVISION

Development, manufacturing, marketing, and servicing of FM mobile two-way radio and base station equipment in the VHF and UHF frequency range, portable, mobile, and fixed HF single sideband transceivers, marine radiotelephones and marine radar. Marketing and servicing of portable radiotelephones, marine navigation and fish-finding equipment, and electronic test instruments.

### RADAR DIVISION

Development, manufacturing, and marketing of surveillance radar for commercial and military use in land and sea environments.

### SPECIAL SERVICES DIVISION

Installation and maintenance of ground-based radar, communications, and air navigation systems; operation of defence communications and detection systems; repair and overhaul of radar, sonar, and communications equipment; repair and calibration of test equipment and standards. Maintenance of antenna farms. Custom-built fabrication of master station alarm displays and perimeter intrusion alarm systems. International marketing of power products.

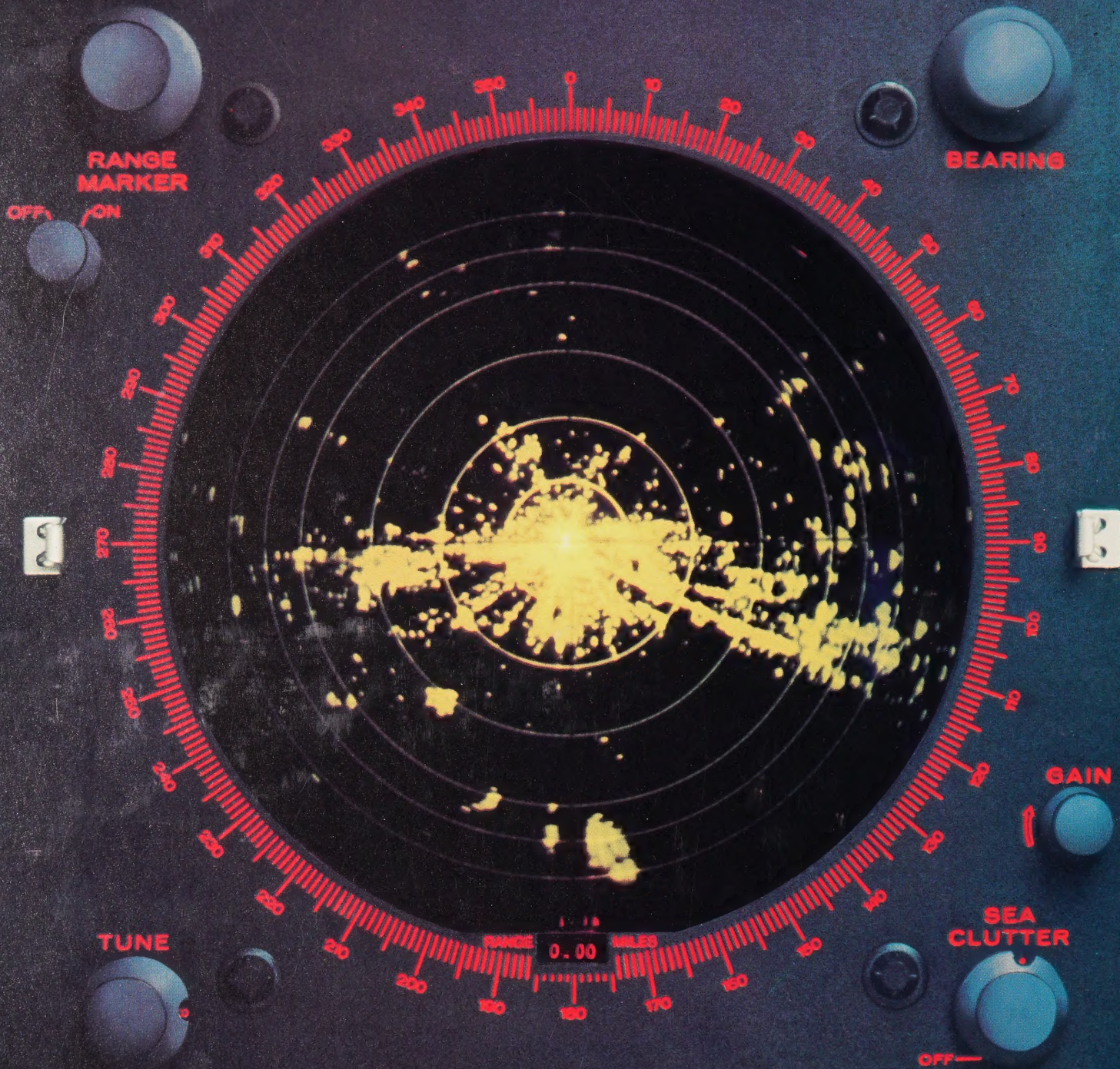
### TELECOMMUNICATIONS DIVISION

Development, manufacturing, and marketing of military land-based micro-wave communications systems including receiver-transmitters, delta modulation multiplexers, small and medium capacity tactical switchboards, and special-to-type test equipment.



**CANADIAN MARCONI COMPANY**





**SCANNER** **TUNE** **WIDE PULSE PANEL** **HTS** **HEATING MARKER**

**POWER** **SHIFT** **TRANSMIT** **RANGE MILES** **RINGS MILES** **RAIN/FTC** **INTENSITY** **RANGE RINGS**